

REMARKS

Applicant thanks Examiner Nguyen for her time and consideration of the present application during the telephonic interview of April 27, 2011.

During the interview the claimed features were discussed relative to ALVEBY. Examiner Nguyen suggested clarifying the meaning of TPE in claims 6 and 21, and the claims and the meaning of "different" in claim 6.

Accordingly, the claims have been amended to clarify these features, and the Application is believed to be in condition for allowance.

**Status of the Claims**

Claims 6, 9 and 21 are amended for clarity. Support for the amendment to claims 6 and 21 may found in the description of TPE as explained at page 5, line 30 to page 6, line 2, as further explained at page 6, lines 5-10. The further amendment to claims 6 and 9 is described, for example, at page 3, lines 13-19.

Claim 32 is new, and finds support on page 13 lines 30-31 and page 14, lines 1-2 and 5-10.

Claims 1, 3-12, 17-22 and 28-32 remain in this application.

**Claim Rejections-35 USC §103**

Claims 1, 3-12, 17-22, and 28-31 were rejected under 35 U.S.C. §103(a) as being unpatentable over MILLS U.S. 4,572,106

(MILLS) in view of ALVEBY WO 00/76298(ALVEBY). This rejection is respectfully traversed for the reasons below.

MILLS was offered for teaching a milking device with a teat receiving flexible sleeve having at least a portion comprising polyvinyl chloride, or plasticized PVC.

The milking device of MILLS does not, as recognized in the Official Action, comprise a teat receiving flexible sleeve, adapted to be positioned on/over a teat, having at least a first portion including a TPV comprising a thermoplastic continuous phase and a cross-linked rubber discontinuous phase, as recited in independent claim 1. MILLS also fails to disclose or suggest a first portion of the sleeve comprising thermo-plastic elastomers (TPE), as recited in independent claim 6 or a teat receiving flexible sleeve having at least a first portion including thermo-plastic elastomers (TPE), as recited in independent claim 21.

ALVEBY was offered for remedying these above identified deficiencies for reference purposes.

However, ALVEBY does not teach any of the following features:

- a thermoplastic vulcanisate or TPV comprising a thermoplastic continuous phase and a cross-linked rubber discontinuous phase, as recited in claim 1 ;
- a structure of claim 6, i.e., a sleeve having a first portion comprising a TPE and a further

portion of the sleeve having a TPE different from the first portion; or

- optimization of parameters to achieve the properties of claim 21 for a TPE (i.e., no suggestion for adjusting hardness, Young's modulus, tensile strength and elongation to achieve a desired effect).

Indeed, ALVEBY discloses a rubber material, not a thermoplastic elastomer (TPE) or thermoplastic vulcanisate (TPV) as claimed. While the claimed TPE and TPV include the elastomeric properties of a rubber material, they comprise a two phase system (as recited in claims 1, 6 and 21).

As described in the present application, the definition of a thermoplastic elastomer is a material consisting of a two phase system, one harder phase and one softer phase. The two phases can be a result of that a block copolymer phase separates and the homogeneous blocks accumulate or that a discontinuous soft phase is formed within a continuous hard phase. See, e.g., the description of TPEs at page 5, line 30 to page 6, line 19 and the description of TPVs on page 11, as well as the two phase system of TPV in Figure 4 of the present specification.

It is important to note is that these phases are constituted by polymers, not additives of any kind. A thermoplastic material gets its properties from either the blocks in a block copolymer or from the two (or more) phase separated

polymers. This is commonly known to any person skilled in the art.

Moreover, it is respectfully noted that TPEs have been known at least since the '50s when DuPont received a patent (US 2,629,873) for a segmented polyurethane material with excellent elastic properties. During '60s these materials with their "virtual cross-links", as they were called, were further developed and in the mid '60s Kraton® were commercially introduced which is a polystyrene-butadiene block copolymer. So, for more than 50 years TPE as a class of materials has been known to a person skilled in the art. Still these materials were not used for liners until the present inventors made their invention, namely to use TPEs.

Thus, as the combination does not teach either TPEs or TPVs, the use of two different TPEs, or how to optimize TPE properties, the combination fails to render obvious the claimed invention as defined in independent claims 1, 6, and 21, as well as new claim 32.

Therefore, withdrawal of the rejection is respectfully requested.

#### **Double Patenting**

Claims 1, 3-12, 17-22 and 28-31 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of

copending Application No. 11/597,716. This rejection is respectfully traversed.

As stated in MPEP 804 I B:

The "provisional" double patenting rejection should continue to be made by the examiner in each application as long as there are conflicting claims in more than one application unless that "provisional" double patenting rejection is the only rejection remaining in at least one of the applications.

As further noted in 1, first paragraph under MPEP 804 I B:

If a "provisional" nonstatutory obviousness-type double patenting (ODP) rejection is the only rejection remaining in the earlier filed of the two pending applications, while the later-filed application is rejectable on other grounds, the examiner should withdraw that rejection and permit the earlier-filed application to issue as a patent without a terminal disclaimer. If the ODP rejection is the only rejection remaining in the later-filed application, while the earlier-filed application is rejectable on other grounds, a terminal disclaimer must be required in the later-filed application before the rejection can be withdrawn.

Therefore, it is respectfully requested that the rejection be maintained until it is the sole rejection, and the present application, which is the earlier-filed application, be permitted to issue without a terminal disclaimer.

#### **Conclusion**

In view of the amendment to the claims and the foregoing remarks, this application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue on that basis is respectfully requested.

The fee of \$220 for the one independent claim added herewith, is being paid concurrently online by credit card.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future submissions, to charge any deficiency or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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